WELL DATA

OPERATOR:	Buttes Gas & Oil Co. - Doheny
PROSPECT:	East Avalo
WELL:	No. 2 J. Nicklas
LOCATION:	C NW NE (660' S/N, 1935' W/E) Section 24: T. 9 N., R. 56 W. Weld County, Colorado
ELEVATION:	4420' GL, 4429' KB.
SURFACE CASING:	8-5/8" set at 105' w/75 sx.
SPUD:	8/28 /65
COMPLETED:	9/4/65 to total depth. P&A 9/5/65
TOTAL DEPTH:	5750' drlr., 5754' Lane-Wells
LOGS:	Sample 4750' - 5750' Induction-electrolog 106' - 5749' Minilog 5480' - 5752'
CORES:	No. 1, (D sand) 5583 - 5619', cut 36', recovered 31.5' intact plus 4.5' crushed shale.
TESTS:	TEST NO. 1 (D sand) 5587 - 5619', recovered 90' clean oil, 180' HGC O&M (50% oil), 855' W. TEST NO. 2 (J_2 sand) 5696 - 5706' (straddle test) Recovered 2150' fresh water - no show oil or gas.
CONTRACTOR:	Murfin Drilling Co. Rig No. 4, Mr. Young, tool pusher
MUD PROGRAM:	Plains Mud Co., Mr. Swingle, engineer

FORMATION TOPS

	Depth	Datum
Niobrara	4770'	- 341'
Carlile	5129	- 700
Greenhorn	5308	- 879
bentonite marker	5484	
D sand	5585	-1156
J Silt	5651	
"J1" sand	5672	-1243
"J2" sand	5698	-1269
Total Depth	5750 drlr. 5754 Lane-Wells	

24-9N-56W

SUMMARY

The No. 2 J. Nicklas was located to evaluate a D "bar" sand which was penetrated in the No. 1 Nicklas, two locations due north. In the No. 1 test, a 14' upper D sand at (-1157) with 4' of oil column, was drilled. An oil-water contact was established at -1161.

A gentle west plunging structural nose appears evident which would be accentuated by a buildup of D bar sand. If the D sand penetrated in the No. 1 Nicklas is continuous with that penetrated in the Creslenn test to the southwest then the Creslenn log depths (top of D at 5603' without shows) must be in error. It appears probable that top of D bar sand is at least (-1161) in the Creslenn well.

Results: Down to Carlile, the subject well maintained a good structural advantage (36') above the No. 1 Nicklas. An unusual thickening of the Carlile-Greenhorn interval and total loss of the D bar negated this advantage. It is interesting to note that on the "J2" sand, a continuous zone in the area, a structural advantage of over 20 feet is again present in the No. 2 Nicklas.

The D bar sand appears to be entirely absent in the No. 2 test. The thin sand stringers tested in the No. 2 well are correlative with those cored in basal D in the No. 1 test.

The control now present from the two unsuccessful tests strengthens the interpretation of a 4 to 5 well field (200 acres) lying between the three control wells. A test located SE SW Sec. 13, T. 9 N., R. 56 W. would test this interpretation.

The J sands were developed but had no significant shows. A minor show in rare clusters at the top of the "J1" sand were noted. No sample shows were found at the top of "J2"sand which has an anomalous log pattern. A test of the top 8' of "J2" recovered 2150' of water.

Electrical log calculations, Lane-Wells Engineer Barta

Zone	Net Pay	Ave. Por.	Wtr.	Possible Production
D 5586-88	2	15%	80%	Wtr
D 5594-98	4	17%	58%	Wtr, poss. oil
"J1" 5674-80	6	19%	71%	Wtr
"J1b"5686-92	6	19%	68%	Wtr
"J2" 5698-5702	4	19%	54%	Wtr, poss. oil
5702-5724	22	20%	80%	Wtr
5724-35	11	22%	85%	Wtr
5746-5749	3	19%	70%	Wtr

WELL HISTORY

8/28/65 PTD 110'. Rigging up. Drill 12-1/4" sfc hole. Set 8-5/8" sfc csg at 105' w/75 sx. Plug down, 4:00 PM.

8/29/65 Drilling at 2545'. WOC to 5:30 AM. Drill out at 7:00 AM. Slope tests at 600', 1070', 1570', and 2103'.

8/30/65 Making trip for Bit No. 3 at 4040'. Trip for Bit No. 2 at 3008'. Slope tests at 2573', 3008', 3569', and 4009'.

8/31/65 Drilling at 5015'. Trip for Bit No. 4 at 4989', strap pipe, no correction. Slope test at 4513' and 4989'. Start mudding-up at 4500'.

9/1/65 Tripping for core barrel at 5583'. Trip for Bit No. 5 at 5235'. Slope test at 5235'.

9/2/65 Reaming core hole with Bit No. 6 at 5600'. Cut and pulled Core No. 1 5583-5619 (D sand). Ran DST No. 1 5587-5619 (D sand).

9/3/65 Drilling at 5705'. Trips for Bit #7 at 5653'; Bit No. 8 at 5691' and Bit No. 9 at 5698'.

9/4/65 Reached TD 5750' 5:45 AM. Circulate 1 hr. for logging. Logging completed 11:00 AM. Ran DST No. 2 5696-5706' (straddle test of "J2" sand). Operators decision to plug and abandon, 11:00 PM. Oral permission and procedure for plugging obtained from Mr. Redgers, Colorado Oil and Gas Commission.

9/5/65 P&A. 15 sx plug across bottom of surface pipe, 10 sx plug at surface.

[redacted]

MUD PROGRAM

The mud program was handled by Plains Mud Co., Mr. Swingle, Engineer. Samples were good and no hole problems occurred. Daily mud-checks were as follows:

Date	Depth	Wt	Vis.	WL	WC	pH	ppm salt	solids	sand
9/1/65	5233	10	43	5.6	1+/32	9.5	300	low	low
9/2/65	5614	10	76	4.8	2/32	9.5	300	-	-
9/3/65	5691	10.3	58	4.7	2/32	9.0	390	high	-

MUD MATERIALS

Date	Gel	Quebracho	Soda Ash	Caustic	Deterg.	Phosphate
8/31/65	41 sx	400#	200#	100#	-	-
9/1/65	-	150#	75#	75#	30 gal	20#
9/2/65	-	50#	25#	25#	5	-
9/3/65	-	50#	-	25#	-	-
9/4/65	10 sx	50#	25#	25#	-	-
Totals	51 sx	700#	325#	250#	35 gal	20#

BIT RECORD

Bit No.	Ser. No.	Size	Make	Type	Jet	Depth Out	Footage	Time
-	Re-run	12-1/4"	Varel	VH3G	-	110	110	-
1	22144	7-7/8"	Varel	V3-S	11/16	2008	2898	20 hrs.
2	22040	7-7/8"	Varel	V3-S	11/16	4040	1032	11-1/2
3	22036	7-7/8"	Varel	V3-S	11/16	4989	949	15-3/4
4	22046	7-7/8"	Varel	V3-S	11/16	5235	246	12 Cone locked
5	22149	7-7/8"	Varel	V3-S	11/16	5583	348	10-1/2
Core No. 1								
	J-2949	6-1/8"	Christensen diamond		-	5619	36	9
6	22028	7-7/8"	Varel	VH3G	11/16	5653	70	5-1/2
7	22063	7-7/8"	Varel	V2	11/16	5691	38	5-1/2
8	20868	7-7/8"	Varel	VH2	11/16	5698	7	2-1/2
9	21980	7-7/8"	Varel	VH3	11/16	5750	52	8-3/4

DEVIATIONS

600	1/4 °	3569	2-1/4°
1070	0 °	4009	2-3/4°
1570	3/4 °	4513	2-3/4°
2103	3/4 °	4989	2-3/4°
2573	1-1/4°	5235	2-3/4°
3008	1-3/4°		

SAMPLE DESCRIPTION
samples lagged

4725-4760	Shale, gry, sft, bent, scat dk grains, w/tr gry sltst
4760	TOP NIOBRARA
4760-4795	Shale, dk gry, fm, sl calc, w/rare tr forams, w/tr inoc, w/tr spkld tn Ls.
4795-4930	Shale, brn-gry, fm, calc, abund spks, drls fn, hackly, w/tr yel-wh bent, w/tr tn spkld Ls.
4930-5010	Shale as abv w/sh, gry, sl slty, platey, w/tr grn bent.
5010-5070	Shale, md gry, w/occ spks w/Ls, tn, abund spks, w/tr yel-wh bent.
5070	Limestone Unit (Fort Hayes?)
5070-5129	Ls, crm, fm to chalky-soft, silty to sandy, w/interb sltst, lt gry, calc, rare glauc, tight, w/faint to gd fluor (brt yel), v faint cut, w/incr of sltst belo 5115".
5129	TOP CARLILE
5129-5170	Shale, gray, occ slty, platey, w/tr gry sltst
5170-5205	Shale, as abv, w/md gry dirty sltst, NS, w/tr shell frags.
5205-5308	Shale, gry, sft, sl blky, w/tr grn-gry bent, w/tr gry sltst.
5308	TOP GREENHORN
5308-5318	Ls, gry to tn, mottled, sl silty, w/yel-grn bent.
5318-5484	Shale, gry to brn-gry, sl to v slty, w/tr gry sltst, w/occ tr hd brn Ls, w/tr bents.
5484	"bentonite"
5484-5500	Sh, gry, blky, fm, w/tr vari-color bents, brt blu, apple grn, yel-grn, w/sl tr brn mottled, gran Ls.
Note:	From here to total depth, samples and core adjusted 5' down hole to agree with logs.
5500-5585	Shale, gry to brn-gry, sl bent, occ slty.
5585	TOP D SAND
5585-5588	(circ 1 hr) 15 min. - tr sand, wh, v fg, sl silic, sl clayey, poor P&P, tr dull fluor 1 grag. 30 min. - sand, wh, as abv, NS. 45 min. - sand, wh, vfg, sl friab to hd, tr glauc, sl clayey, spkly, v poor P&P, occ frag had tr fluor, wk fluor of cut. 1 hr. - Sand, gry, v fg, hd, silic, tite to v poor P&P, tr of show, as abv.
5588-5624	CORE NO. 1 (cut 36', recov 31.5' intact, plus 4.5' brkn shale through lower part of core) Time --- 10, 15 14, 12, 13, 15 28 20, 22, 12, 12, 11 10, 13, 13, 10, 13 11, 13, 14, 12, 12 15, 12, 12, 11, 13 13, 13, 12, 19, 13 15, 16, 15, 20, - .
5588-90.2	Rewkd siltst, vf g sand, and blk shale, NS, num wm trails.
5590.2-91.2	Sand, wh, vf g, hd, sl silic, sm clay, micac, tite w/sl por pods w/lt brn stain, sl spty fluor, occ thin shale interbeds, bldg oil & gas frm por streaks.
5591.2-92.8	Rewkd vf g wh, hd, silic, tite sand, interb w/blk shale.
5592.8 - 93.2	Sand, tn, fg, friab to sl silic, occ shale pods, fair P&P, sl bldg oil and gas, fair satur, gd odor, fluor.
5593.2-96.2	Sand, tn, fg, sl silic, clean, scat carb trash, occ micac, fair P&P, occ clay ball, bldg oil frm more por strks and fractures, occ bldg of muddy wtr (?), vert frac 5593.2-93.8, 5594.5-94.7, abund clay frage 5595.0-95.5.
5596.2-99.2	Interb sand, 2"±, w/blk shale lams and pods, fair shows in occ por strks

Sample Description Cont'd

5599.2-5600.9	Lam blk shale, carb., dip are 6°.
5600.9-5601.2	Coal and v carb shale.
5601.2-5624.0	Blk lam shale w/dens hd mdst at 5612.6-13.1, 5614.9-15.2, w/thin lam & pods sltst to 5612.6.
5624-5651	Shale, gry, fm, sl platey, tr hd brn mdst, w/occ tr brn-gry sltst.
5651	J SILT
5651-5672	Sltst, md gry to brn-gry, occ bent, w/shale, as abv.
5672	"J1" SAND
5672-5686	Sand, tn, fg, sub-ang, poor to fair sorting, scat dk grains, sl tr glauc, sl clayey, tite to good P&P, most without show, rare cluster sl stain, fair fluor, v faint cut, fluor of cut.
5686	"J1b" SAND
5686-5698	Sand, wh, vf-fg, poor sorting, sl to v clayey, occ silic hd, tite to sl P&P, NS.
5698	"J2" SAND
5698-5723	Sand, wh, fg, poor to fair P&P, w/tr to abund wh clay, NS.
5723-5739	Sand, crm to lt tn, vf to occ fg, friab, fair sorting, sl clay fill, fair P&P, NS.
5739-5746	Shale, dk gry, platey
5746-5754	Sand, clear, fg, scat dk grns, fair P&P, NS, w/tr sand, wh, fg, sl clayey, fair P&P, NS.
5754	Total Depth (Land-Wells) 5750' drlr.

Samples filed w/Amstrat, Denver, Colorado